

### **REMARKS**

Claims 1, 3-6 and 9-22 are currently pending in the subject application, and are presently under consideration. Claims 1, 3-6 and 9-22 are rejected. 1, 3-6, 9, 10, and 14-22 have been amended. Favorable reconsideration of the application is requested in view of the amendments and comments herein.

#### **I. Amendments to the Specification & Drawings**

The Specification has been amended to correct typographical errors as well as to delete all reference to FIG. 6 which has been cancelled by this amendment.

A Replacement set of drawings, including FIGS. 1-5, has been submitted herewith to correct what appears to have been an error in filing an incorrect set of drawings. The changes associated with such drawings have been discussed above in the AMENDMENTS TO THE DRAWINGS section at pages 4-5 of this Response.

#### **II. Rejection of Claims 1, 6 and 16 under 35 U.S.C. 112**

Claims 1, 6 and 16 have been rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. These claims have been broadened to delete all reference to “reverse cable television signals” and to delete all recitation of “performs no multiplexing.” In view of such amendments, withdraw of this rejection is respectfully requested.

#### **III. Rejection of Claims 1, 3, 6, 9, 12, 14-15 under 35 U.S.C. 103(a)**

Claims 1, 3, 6, 9, 12, 14-15 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,485,197 to Hoarty, (hereinafter, “Hoarty”) in view of allegedly Admitted Prior Art Fig. 3, and further in view of U.S. Patent No. 4,920,533 to Dufresne, (hereinafter, “Dufresne”) and U.S. Pat No. 3,886,454 to Oakley, (hereinafter “Oakley”). Applicant traverses this rejection for the following reasons.

Before addressing the substance of this rejection, the figure to which Applicants believes the Examiner was referring to as “Admitted Prior Art FIG. 3” now corresponds to FIG. 2 of the present application in view of the Amendments to the Drawings, and that the “A/D converter

308” of such Figure now corresponds to “A/D converter 208” in the Replacement set of drawings.

Claim 1 has been amended to make explicit many features which were believe implicit in the preceding iteration of this claim. Additional typographical errors have been corrected and amendments have also been made for sake of consistency throughout the claim set, such as changing instances of the definite article "said" to "the".

In contrast to claim 1, the combiner of Hoarty is not a reverse transmitter, as the combiner 47 of Hoarty simply performs frequency translation because the bandwidth allocation is the same for every trunk. See Hoarty, at Col. 6, lines 32-35, 49-57 and Col. 6, line 66 through Col. 7, line 7. Moreover, there is no basis in Hoarty to support a plurality of optical nodes and such a position is not even asserted in the Office Action with respect to claim 1. In fact, the Office Action fails to proffer any evidence to support that such a feature is taught or suggested in the art of record.

In contrast to the position in the Office Action, claim 1 recites that each reverse transmitter includes several components including a converter, a RF carrier-detect circuit, a delay circuit and a switch. These components cooperate to perform a particular function of burst mode operation in which the reverse transmitter transmits digitized reverse signals upstream through a digital network only if the carrier-detect circuit detects the presence of the RF carrier signal, as recited in claim 1.

In addition to the converter, claim 1 recites that each reverse transmitter include RF carrier-detect circuit, a delay circuit and a switch all of which are tied in some way to the converter of claim 1 to enable a burst-mode operation by the reverse transmitter. The Office Action seeks to rely on isolated teachings from Dufresne and Oakley as providing teachings that, if combined with Hoarty, render claim 1 obvious. However, as explained below, even if the teachings of Dufresne and on Oakley are combined with Hoarty, as suggested in the Office Action, the combination still does not teach all claimed elements.

In Dufresne, trunk filters 7 are connected in series with various branches of the distribution network. In particular, the Dufresne teaches that the trunk filters 7 are placed on the trunk between bidirectional amplifiers 4. See FIG. 1 of Dufresne. Neither Dufresne nor Hoarty teaches or suggests placing such trunk filters 7 in a reverse transmitter of an optical node, and the

Office Action is devoid of any other evidence that would support such a position. Therefore, any reasonable modification of Hoarty in view of Dufresne would (at most) only enable one of ordinary skill in the art to place the trunk filter in series with the branches of the distribution network in Hoarty. In sharp contrast, claim 1 recites that the carrier-detect circuit is part of a reverse transmitter that is included in a plurality of optical nodes. Additionally, the trunk filter 7 of Dufresne does not correspond to the recited carrier-detect circuit of claim 1. Accordingly, the combination of Dufresne and Hoarty fail to make obvious what is recited in claim 1.

The Office Action contends that the deficiencies of Hoarty and Dufresne are alleviated by Oakley's teaching of a squelch circuit. However, Oakley fails to provide any teaching that such squelch circuit would be part of a transmitter. Instead, similar to as explained with respect to Dufresne, the squelch circuit is located at a line extender return amplifier position adjacent a bridging amplifier. Oakley at Col. 5, lines 40-45. Therefore, since neither Hoarty nor Oakley teaches placing a squelch circuit in a transmitter of an optical node and no other evidence of record supports such a position, the legal conclusion of obviousness in the Office Action is not based on a rational underpinning that can sustain the obviousness rejection.

Moreover, since it would seem that the filter of Dufresne appears to operate without losing information, the addition of the delay from Oakley in combination with the filter of Dufresne into the system of Hoarty seems an unnecessary complication and is likely incompatible. Additionally, Oakley teaches that the delay line 84 is utilized due to the delay in activating the sensor signal and the switch 82. There is no evidence in Dufresne or elsewhere in the Office Action to support that such delay would be present in the trunk filter taught in Dufresne, making the stated motivation for the combination without merit. For example, if the trunk filter 7 of Dufresne resulted in losing message information, it is unlikely that one of ordinary skill in the art would look to Oakley for the use such a trunk filter with the filter 7 of Dufresne in the system of Hoarty. Accordingly, a proposition that the delay from Oakley would be used in combination with the trunk filter from Dufresne appears to only be supported if the Examiner resorts to application of improper hindsight in which the present application and claim 1 is used as a blueprint guiding the reconstruction of otherwise inconsistent and unrelated concepts from the teachings of Hoarty, Dufresne and Oakley.

Moreover, the Office Action fails to allege that that any reference teaches a transmitter that includes a switch as is recited in claim 1. In fact, the entire Office Action articulates no reasoning with any rational underpinning that remotely addresses this claimed feature. Since the Office Action has not met its initial burden in presenting a *prima facie* case of unpatentability, claim 1 is patentable. Regardless, none of the cited references of Hoarty, Dufresne or Oakley, individually or in combination teaches that a transmitter includes a switch configured to operate in the manner recited in claim 1. For instance, the switch 82 in Oakley is not controlled in the manner recited in claim 1, but instead operates based on the sensed amplitude of the amplified output signal from the amplifier 80. See, *e.g.*, the various embodiments shown and described in Oakley at Col. 5, line 46, through Col. 6, line 40.

Regarding the grounds of rejection at the top of page 7 relating to transmission of the digitized reverse signals, Applicants submit that the amendment to claim 1 recites interrelationships between the carrier-detect circuit, the delay circuit and the switch of the transmitter, which are not taught or suggested in the art of record. Thus, the differences between the combined teachings of Hoarty and Dufresne and what is being claimed demonstrates that resulting operation of the transmitter and switch of claim 1 is not made obvious by the combination of cited references.

In contrast to the assertion in the Office Action, Hoarty contains no teaching that optical nodes receive analog signals from subscriber equipment. In particular, the Office Action alleges that the combiners 47 of Hoarty correspond to the optical nodes. However, Hoarty does not teach that there are a plurality of optical nodes as claimed. Additionally, Hoarty teaches that the combiner 47 is part of the electrical portion of the distribution plant 68b and that the converters 69a and 69b are outside of such the distribution plant 68b, which distribution plant 68b is where Hoarty teaches the combiner 47 resides. See FIG. 6 of Hoarty. Thus, in contrast to the contention that “Hoarty does not explicitly discuss an A/D converter” (See Office Action at page 5), Hoarty actually expressly teaches that the A/D converters 69b are located at the subscribers - not part of a reverse transmitter. Hoarty, Col. 7, lines 58-65. Since the combiners are combining digital data by performing frequency translation of the signals, the proposition that an optical node would include an A/D converter, such as shown and described in FIG. 2 (as amended) of the present application appears unsupported.

For the reasons discussed above, claim 1 is not obvious over Hoarty in view of Dufresne and Oakley. Reconsideration and allowance of claim 1 and claims 3-5, which depend from claim 1, are respectfully requested.

Claim 6 has been amended in a manner similar to claim 1. Accordingly, claim 6 is patentable for similar reasons to those discussed above with respect to claim 1. Additionally, the Office Action contends that Hoarty inherently comprises a plurality of optical transmitters. However, this position is not supported by the evidence of record since it has not been demonstrated by extrinsic evidence that missing descriptive matter is necessarily present in the thing described in the Hoarty. That is, inherency may not be established by mere probabilities or possibilities as is the case in the Office Action at page 8. As discussed above, only a single combiner 47 and optical transmitter 43c is shown and described in Hoarty. Reconsideration and allowance of claim 6 and its dependent claims 9, 12, and 14-15 are respectfully requested.

#### **IV. Rejection of Claims 4-5, 10-11 and 13 under 35 U.S.C. 103(a)**

Claims 4-5, 10-11 and 13 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Hoarty, allegedly Admitted Prior Art Fig. 3 (now FIG. 2 of the present application), Dufresne and Oakley, and further in view of U.S. Patent No. 5,850,218 to LaJoie (hereinafter, "LaJoie"). Since LaJoie fails to cure the deficiencies of Hoarty, Dufresne and Oakley and no other evidence has been proffered to support the obviousness position, claims 4-5 are patentable for the reasons discussed above with respect to claim 1.

Additionally, regarding claim 5, the Office Action simply contends that Hoarty teaches that the upstream signals may be transmitted as addressed data packets. However, claim 5 also recites the inclusion of a discriminator circuit that is coupled between the digital network and the digital headend and the analog headend. No such discriminator is disclosed in any art of record, including Hoarty, Dufresne, Oakley, and LaJoie, taken individually or in combination. Since the Office Action has not presented any other evidence to support its rejection of claim 5, the position in the Office Action fails to articulate a rational underpinning sufficient to support its obviousness position. In fact, the Office Action has failed to meet its initial burden in presenting a prima facie case of unpatentability regarding claim 5. The rejection of claim 11 is likewise deficient. Accordingly, allowance of claims 5 and 11 is respectfully requested.

Claims 10 and 13 are also patentable for similar reasons to those explained in relation to claim 4 and by virtue of their dependency from claim 6.

For these reasons, Applicants respectfully request reconsideration and allowance of claims 4-5, 10-11 and 13.

**V. Rejection of Claims 16-19 and 22 under 35 U.S.C. 103(a)**

Claims 16-19 and 22 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Hoarty, Admitted Prior Art Fig. 3 (Now FIG. 2 of the present application) and Dufresne. Applicant traverses this rejection for the following reasons.

The method of claim 16 has been amended in a manner similar to the amendments of claim 1 in which the transmission of reverse digital optical signals are transmitted only if the presence of a reverse carrier signal is detected by a carrier-detect circuit. Since, for the reasons explained above with respect to claim 1, such transmission of reverse digital optical signals is not taught or suggested in the combination of references and no other evidence has been presented to support the obviousness position, claim 16 is patentable. Accordingly, reconsideration and allowance of claim 16 and its dependent claims 17-22 are respectfully requested.

**VI. Rejection of Claims 20-21 under 35 U.S.C. 103(a)**

Claims 20-21 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Hoarty, Admitted Prior Art Fig. 3 and Dufresne, further in view of LaJoie.

Claims 20 and 21 have been amended for sake of consistency, by changing the definite article “said” to “the.” Claims 20 and 21 depend from claim 16 and are patentable for at least the same reasons as claim 16.

Additionally, claim 21 does not simply recite that the head end receives both analog and digital signals, but also recites that a discriminator circuit analyzes packet header information to provide the reverse digital optical signals (from the optical transmitters - claim 16) to one of the analog or digital headends. No such discriminator circuit is disclosed in any art of record, including Hoarty, Dufresne, Oakley, and LaJoie, taken individually or in combination. Since the Office Action has not presented any other evidence to support its rejection of claim 21, the position in the Office Action fails articulate a rational underpinning sufficient to support its obviousness position. Similar to as discussed above with respect to claim 5, the Office Action has failed to meet its initial burden in presenting a prima facie case of unpatentability regarding claim 21.

For these reasons, reconsideration and allowance of claims 20-21 are respectfully requested.

**VII. CONCLUSION**

In view of the foregoing remarks, Applicant respectfully submits that the present application is in condition for allowance. Applicant respectfully requests reconsideration of this application and that the application be passed to issue.

Should the Examiner have any questions concerning this paper, the Examiner is invited and encouraged to contact Applicant's undersigned attorney at (216) 621-2234, Ext. 106.

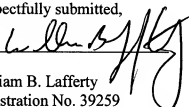
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